

1. A light emitting package comprising:

a thermally conductive chip carrier having top and bottom principal surfaces;  
at least one light emitting chip attached to the top principal surface of the chip carrier; and  
a lead frame attached to the top principal surface of the chip carrier and not contacting the bottom principal surface of the chip carrier.

2. The light emitting package as set forth in claim 1, further comprising:

an encapsulant encapsulating at least the light emitting chip and the top principal surface of the chip carrier, the bottom principal surface of the chip carrier and leads of the lead frame extending outside the encapsulant.

3. The light emitting package as set forth in claim 1, further comprising:

one or more areas of electrically conductive material disposed on the top principal surface of the chip carrier, the attachment of the lead frame to the top principal surface electrically contacting the one or more areas of electrically conductive material.

4. The light emitting package as set forth in claim 3, wherein the one or more areas of electrically conductive material include:

a first area of electrically conductive material defining a first electrical terminal;

a second area of electrically conductive material electrically isolated from the first area, the second area defining a second electrical terminal of opposite electrical polarity from the first electrical terminal;

electrodes of the light emitting chip being electrically connected with the first and second electrical terminals; and

the lead frame being attached to the first and second electrical terminals.

16. The light emitting package as set forth in claim 1, wherein the bottom principal surface of the chip carrier is electrically isolated from the lead frame.

17. A light emitting package comprising:

a chip carrier having top and bottom principal surfaces;

at least one light emitting chip attached to the top principal surface of the chip carrier; and

a lead frame attached to the top principal surface of the chip carrier and having electrical leads extending from portions of the lead frame attached to the top principal surface of the chip carrier, the electrical leads being shaped to include lead portions approximately coplanar with the bottom principal surface of the chip carrier.

18. The light emitting as set forth in claim 17, wherein the bottom principal surface of the chip carrier is at least one of substantially electrically non-conductive and electrically isolated from the lead frame.

19. The light emitting package as set forth in claim 18, wherein the chip carrier, light emitting chip, and lead frame define a surface mountable unit, the light emitting package further comprising:

printed circuitry, the surface mountable unit being mounted on the printed circuitry with the lead portions approximately coplanar with the bottom principal surface of the chip carrier electrically contacting the printed circuitry.

20. The light emitting package as set forth in claim 19, further comprising:

a printed circuit board including the printed circuitry, the bottom principal surface of the chip carrier being in thermal contact with the printed circuit board.

21. The light emitting package as set forth in claim 19, further comprising:

a printed circuit board on which the printed circuitry is disposed, the bottom principal surface of the chip carrier being in direct contact with the printed circuit board.

22. The light emitting package as set forth in claim 21, wherein the chip carrier is soldered to the printed circuit board.

23. The light emitting package as set forth in claim 21, wherein the chip carrier is soldered to the printed circuit board, said soldered connection being thermally conductive but not conducting electrical current when the light emitting chip is operated.

24. The light emitting package as set forth in claim 21, wherein an attachment between the lead portions contacting the printed circuitry is different from an attachment of the bottom principal surface of the chip carrier contacting the printed circuit board.

25. The light emitting package as set forth in claim 21, further comprising: an encapsulant encapsulating at least the light emitting chip and the top principal surface of the chip carrier, the bottom principal surface of the chip carrier and at least the lead portions approximately coplanar with the bottom principal surface of the chip carrier extending outside the encapsulant.

26. The light emitting package as set forth in claim 1, wherein the chip carrier comprises:

a semi-insulating silicon wafer.

27. The light emitting package as set forth in claim 1, wherein the chip carrier comprises:

an electrically conductive chip carrier having the top principal surface electrically insulated and the bottom principal surface not electrically insulated.

28. The light emitting package as set forth in claim 27, wherein the chip carrier comprises one of:

an electrically conductive metal chip carrier and an electrically conductive silicon chip carrier.